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OPERATIONAL FIRES, MODERN DOCTRINE,  
AND AMPHIBIOUS OPERATIONS

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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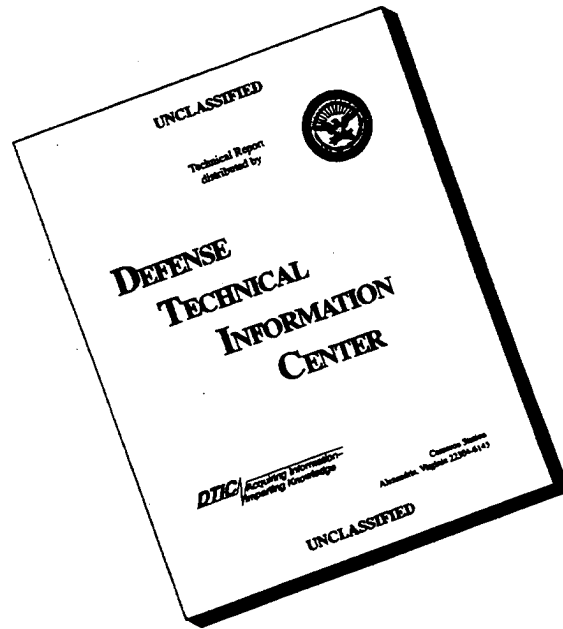
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Abstract of

OPERATIONAL FIRES, MODERN DOCTRINE, AMPHIBIOUS OPERATIONS

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## Introduction

Today's war fighters can no longer afford to think solely in tactical terms. War fighters must be able to think strategically, operationally, and tactically. Of the three levels, operational thinking may be the most important. Unfortunately, it is also the least studied and practiced. The inability to think operationally can cost lives and, more often than not, extend the course of the war.

Thinking operationally or, more precisely, studying operational art is really nothing new. The term first appeared in publication as early as 1799 in European military writings.<sup>1</sup> It should come as no surprise that the practice of operational art has continually evolved over time due to technological and societal changes. In fact, the development and in some cases the refinement of operational art continues unabated today. In the United States, as of June 1995, 58 joint doctrine publications had been completed with another 44 in development. The Department of the Army has finally published (May 1995) Field Manual (FM) 100-7, Decisive Force: The Army in Theater Operations, which is a superb manual on war fighting at the operational level. The Marine Corps led the way by publishing Fleet Marine Force Manual (FMFM) 1-1, Campaigning, in 1990. Campaigning is a succinct little book which clearly captures how the Marine Air-Ground Task Force (MAGTF) will fight operationally. Additionally, the Marine Corps has FMFM 2-1 in draft, Fighting the MEF, which describes how the Marine Expeditionary Force (MEF) will fight not only at the operational level, but in a joint environment as well. Although slow to start, the Navy published (March 1994) Naval Doctrine Publication (NDP) 1, Naval Warfare, which begins to address how the Navy will fight operationally. Finally, there is no shortage of student

monographs written at the staff and war colleges covering a plethora of topics on operational issues.

So what does all of this really mean? Simply put, military officers need to understand how to fight operationally if they expect to win battles. FMFM 1-1 reiterates this theme by stating that, "tactical success in combat is not enough, because tactical success of itself does not guarantee victory in war."<sup>2</sup>

My purpose in writing this paper is threefold. First, I will illustrate the importance of thinking operationally. Second, I intend to demonstrate how disjointed our operational doctrine is by Service. My final objective is to convince the reader of the value in planning operational fires in the conduct of amphibious operations. I plan to do this by covering four main areas in my paper. First, I will conceptually examine operational art as a theory. Second, I will explore doctrinally how the Army, Navy, and Marine Corps intend to fight at the operational level. Third, I will discuss the role of operational fires in support of amphibious operations and provide two historical examples (Leyte and Saipan invasions) where operational fires were used to support amphibious landings. Finally, I will conclude with my recommendations for the future.

## **Theory**

**Operational Art.** FM 100-5, Operations, defines operational art as "the employment of military forces to attain strategic goals through the design, organization, integration, and execution of battles and engagements into campaigns and major operations. In war, operational art determines when, where, and for what purpose major forces will fight over time."<sup>3</sup> Operational art is only one component of military art. The other two components are

tactics and strategy. Simply put, operational art is the glue that binds all three components together. Joint Pub (JP) 3-0, Doctrine for Joint Operations, accurately portrays the melding effects of all three components by stating that "operational art translates the joint force commander's strategy into operational design, and ultimately, tactical action, by integrating the key activities of all levels of war."<sup>4</sup> The key ingredients of operational art are:

1. Operational art "aims to get strategically meaningful results through tactics,"<sup>5</sup>
2. Operational art overlaps into strategy and tactics and it can span all three levels of war, and,
3. Operational art not only encompasses war, but covers the entire spectrum of conflict to include those military operations categorized as "other than war."

Finally, operational art requires the synchronization of operating systems. Each service has different operating systems although similarities do exist between them (See Appendix A). In FM 100-7, the Army lists six operating systems: (1) operational movement and maneuver, (2) operational protection, (3) operational battle command, (4) operational intelligence, (5) operational logistics, and finally, (6) operational fires. The Marine Corps, on the other hand, lists seven operating systems (called functions/capabilities) in FMFM 1-1. The seven functions are: (1) maneuver, (2) mobility, (3) tempo, (4) intelligence, (5) surprise, (6) logistics, and (7) leadership. As the Marine Corps continues to refine its doctrine, changes will occur. For instance in FMFM 2-1 (draft), the Marine Corps still has seven operating systems, but they are now defined as: (1) maneuver,



(2) aviation, (3) fires, (4) mobility, countermobility, and survivability, (5) combat service support, (6) command and control, and (7) intelligence. Finally, NDP-1 lists four critical operational capabilities for the Navy. Critical capabilities for naval expeditionary forces are: (1) command, control, and surveillance, (2) battlespace dominance, (3) power projection, and (4) force sustainment. The point is that each of the Services recognizes the importance of operating systems and how their synchronization forms the basis of operational art. More importantly, operational fires are viewed as a separate element of the commander's concept of operations that must be closely integrated and synchronized with operational maneuver.<sup>6</sup> The difficulty, however, continues to lie in how each of the Services defines (or fails to define) operational fires.

**Operational Fires.** The concept of operational fires is difficult to understand. The problem is essentially twofold. One, there are very few military historians who write from an operational perspective. Therefore, officers who do look to history to glean lessons learned from a operational view will more than likely be sorely disappointed. Two, our operational doctrine is still evolving. Except for the Army, most services have only just begun to formulate their thoughts in writing on operational art in the last 10 years.

Professor Milan Vego's unpublished paper on "Operational Functions" provides a sound basis for understanding what constitutes operational fires. According to Vego, fires must fulfill several conditions before they can be considered operational. Vego puts forth the following criteria for operational fires:

1. Operational fires must be planned and synchronized at the operational level,
2. Operational fires must have an "operational" purpose,
3. Operational fires must cause the enemy to react either operationally or strategically,
4. Operational fires usually occur before the commencement of a major operation or campaign,
5. Operational fires have a decisive impact on the outcome of a major operation or campaign, and,
6. Operational fires occur outside the area of operations.<sup>7</sup>

If fires meet the above criteria, then their application should be considered operational. It is important to note, however, that operational fires do not support ground forces that eventually secure or hold terrain. Fires that permit ground forces to physically occupy terrain may enhance a position, facilitate the movement of forces in an operation or campaign, and even permit a decided advantage. They are not, nor should they be considered, operational fires. Fires that do secure terrain for ground forces are tactical fires.

As mentioned above, operational fires need to be planned and have a specific purpose. Vego goes to great lengths in his unpublished writings to stress that "it is not the range and firepower that counts the most, but the purpose for which a weapon platform or force is to be used."<sup>8</sup> He further states that the seven principal purposes of operational fires are to:

1. Facilitate operational maneuver of friendly forces,
2. Prevent or disrupt operational maneuver of enemy forces,
3. Isolate an area or theater of operations,

4. Prevent the arrival of the enemy's reinforcements into a given theater of operations,

5. Destroy or neutralize the enemy's operational reserve,

6. Destroy or neutralize critical functions and facilities in the enemy's operational depth, and,

7. Deceive the enemy as to the sector of main effort or point of main attack.<sup>9</sup>

Of course, the purpose a commander chooses to assign to operational fires will depend on a variety of factors. For instance, the type of theater (mature or immature), degree of coordination, number of targets, depth of the area or theater, or more generally the operational scheme all influence the employment of operational fires.

Finally, there are two main types of operational fires: lethal and nonlethal. Lethal fires are simply those fires designed to delay, disrupt, destroy, or degrade an enemy's forces, operating systems, and/or facilities. Lethal fires can use a multitude of delivery systems depending on whether the weapons are conventional or those of mass destruction. By contrast, "nonlethal fires are intended to impair, disrupt, or delay the performance of enemy operational forces, functions, and facilities."<sup>10</sup> The two principal methods of employing nonlethal fires are through the mediums of electronic warfare or psychological operations. Again, like lethal operational fires, the aim is to prevent or disrupt the operational maneuver of the enemy.

In summary, most Services essentially agree upon the definition of operational art. Additionally, Professor Vego provides a sound definition of operational fires, although his writings are unofficial. Vast differences still exist between the Services on what operating systems should be

considered critical functions. The problem is further exacerbated by the lack of standardization in operational terminology as we will see below.

### **Doctrine**

Army. The United States Army has developed the most complete doctrine on operational art of all the Services. The recent publication of FM 100-7, Decisive Force: The Army in Theater Operations, underscores the importance the Army places on fighting operationally. FM 100-7 builds upon the doctrinal foundation established in FM 100-5 (Operations). As a keystone publication, FM 100-5 establishes the three levels of war and, more importantly, recognizes the importance of operational art in the attainment of strategic and/or operational objectives. FM 100-5 continues the Army's emphasis on firepower. At the operational level of war, FM 100-5 stresses the synchronization of all friendly fires across the entire spectrum of fire support.<sup>11</sup> Although FM 100-5 never specifically addresses operational fires, operating systems/functions, or operational design, it does successfully differentiate operational art as a separate component of military art. The other problem with FM 100-5 for the operational reader is it repeatedly switches back and forth between the levels of war. Nevertheless, these problems are relatively minor and FM 100-7 lays a firm foundation for operational doctrine.

The term operational fires is defined by FM 100-7 as the "commander's application of nonlethal and lethal firepower to achieve a decisive impact on the conduct of a campaign or major operation."<sup>12</sup> Operational fires can be either joint, multinational, or both. As mentioned earlier in this paper, operational fires are a separate component of the commander's concept of operation which must be fully integrated into and synchronized with the operational scheme of maneuver (itself a separate operating system).

Operational fires, according to FM 100-7, have several characteristics. They: (1) achieve both operational and strategic objectives, (2) hold, disrupt, delay, or limit critical enemy functions at risk, (3) extend the battlefield both in space and time, (4) expose or attack enemy centers of gravity, (5) set conditions for operational maneuver, and (6) deny terrain in support of operational objectives (See Appendix B).<sup>13</sup>

Finally, according to Army doctrine operational fires perform three general tasks. They can be used to facilitate maneuver, isolate the battlefield, or destroy critical enemy functions and facilities. "Operational fires facilitate maneuver in depth by suppressing the enemy's deep-strike systems, disrupting the enemy's operational maneuver and tempo, and creating exploitable gaps in tactical defenses."<sup>14</sup> An important concept under operational fires and their ability to facilitate maneuver is the term "interdiction." Interdiction fires essentially constitute a subset of operational fires. Interdiction fires are designed to achieve synergy with the operating system of maneuver, thereby creating maximum leverage for the operational commander. Interdiction also plays an integral role in isolating the battlefield, the second general task of operational fires. Isolating the battlefield with operational fires can: (1) destroy the enemy forces, (2) curtail the enemy's freedom of movement and information, (3) influence the enemy's battle tempo, and (4) obstruct the redeployment or movement of forces.<sup>15</sup> The third and final general task is the use of operational fires to destroy critical enemy functions and facilities. Here, the operational commander targets high-value command and control (C<sup>2</sup>) systems, mobility assets, air defense sites, and enemy long-range delivery systems. Regardless of the specific task assigned to operational fires, the objective behind their

use is to eliminate or substantially degrade the enemy's critical operating systems/functions.<sup>16</sup>

**Navy.** NDP-1, Naval Warfare, provides the framework for how the United States Navy will fight operationally. NDP-1 outlines missions, emphasizes joint and multinational operations, and describes the ways that naval forces will accomplish their mission. Unfortunately, NDP-1 actually does little to advance how the Navy will fight operationally. The principles of war and basic concepts such as centers of gravity, critical vulnerabilities, focus of main effort and commander's intent are all important ideas that need to be developed in the context of fighting operationally.

NDP-1 does, however, mention critical operating capabilities (C<sup>2</sup> and surveillance, battlespace dominance, power projection, and force sustainment), although each subject is covered in only a cursory manner. Operational fires, per se, are neither discussed in NDP-1 nor are they mentioned under "power projection." Certain platforms (strike aircraft, cruise missiles, etc.) conducive to operational fires are mentioned, but only as a capability that may be used at any level of war. Clearly, the Navy has a long way to go in developing its doctrine, although NDP-1 is a step in the right direction.

**Marine Corps.** In 1989 the United States Marine Corps, under the leadership of then Commandant Alfred M. Gray, developed a philosophy on war fighting. FMFM 1, appropriately titled Warfighting, is the keystone publication on how the Marine Corps plans to fight. Many military art concepts are discussed in FMFM 1; however, the primary focus remains at the tactical level. One of the most important new concepts in FMFM 1 is the idea of maneuver warfare. "Warfare by maneuver stems from a desire to circumvent a problem and attack it from a position of advantage rather than meet it

straight on."<sup>17</sup> Maneuver warfare is nothing more than matching one's strength against a selected enemy weakness. Maneuver warfare at the operational level is critically important because operational fires must be appropriately coordinated, integrated, and synchronized into the commander's concept of operations.

FMFM 1-1 (Campaigning) takes General Gray's war fighting philosophy in FMFM 1 and applies the concepts to the operational level of war.<sup>18</sup> It is here where operational maneuver, as a critical function that the commander must design into his campaign plan, begins to coalesce truly into operational doctrine. Although FMFM 1-1 furthers our understanding of fighting at the operational level, it is, however, woefully incomplete. Its greatest shortcoming lies in its failure to more fully develop the ideas of operational functions, specifically operationally fires (of which FMFM 1-1 makes no mention). One would expect FMFM 2-1 (draft), Fighting the MEF, to be the capstone publication on how the Marine Corps will fight operationally. Unfortunately, FMFM 2-1 (draft), as currently written, is incomplete and lacks consistency on how to fight operationally. As previously mentioned, "fires" are considered an operating system in FMFM 2-1 (draft). The operating system approach was developed so that commanders and their staffs would think in terms of integrated systems rather than just units.<sup>19</sup> Operating systems apply to all levels of war (strategic, operational, and tactical) but their purpose is decidedly different. For instance, in FMFM 2-1 (draft) one example given uses "fires" as an operating system in the breaching of a defensive belt. Clearly, this application of fires is solely tactical. Furthermore, this example provides no insight into how the MEF commander is to shape the battlefield with operational fires.

Fortunately, FMFM 2-1 (draft) does discuss fires as a top-down planning process. The MEF commander "uses a top-down process so that the employment of fires can best express his intent and take advantage of the sorts of fleeting opportunities that are critical in defeating an enemy force."<sup>20</sup> Certainly, top-down planning fulfills the requirement that operational fires be planned and synchronized at the operational level, but other essential elements of operational fires are missing in FMFM 2-1 (draft). Furthermore, FMFM 2-1 (draft) does not adequately address the operational purpose of fires, commencement of operational fires, impact of operational fires, and enemy reaction to operational fires.

Finally, the recently published "Commandant's Planning Guidance (CPG)" is indicative of the continued focus on operational issues not only for the Marine Corps, but for the Navy as well. "Forward...From the Sea" is a Navy and Marine Corps white paper that outlines how the expeditionary naval services will operate at the operational and tactical levels of war. Undoubtedly, this "landmark shift in operational focus" is a concept that the naval services will continue to struggle with as joint doctrine continues to mature.<sup>21</sup>

**Joint Doctrine.** Joint Pub 3-0, Doctrine for Joint Operations, is a keystone publication that "provides fundamental principles and doctrine for the conduct of joint and multinational operations."<sup>22</sup> JP 3-0 sufficiently explains the levels of war, operational art, and campaigning, at the strategic and operational levels of war. Although JP 3-0 does not specifically address operational fires as a functional capability, it does refer to the required synchronization that should occur between maneuver and interdiction. JP 3-0 stipulates that "interdiction and maneuver should not be considered separate



operations against a common enemy, but rather complementary operations designed to achieve the JFC's campaign objectives."<sup>23</sup> Furthermore, JP 3-0 states that "interdiction operations can be conducted by many elements of the joint force and can have tactical, operational, and strategic effects."<sup>24</sup> Interdiction fires employed at the operational level, as portrayed in JP 3-0, can be construed to be operational fires. The confusion, however, between interdiction and operational fires will continue until all the Services agree upon a single definition for each term.

The good news is that Joint Pub 3-09 (third draft), Doctrine for Joint Fire Support, begins to doctrinally capture how we define operational fires. Unfortunately, JP 3-09 (third draft) is not as detailed as it should be. It is equally apparent that JP 3-09 (third draft) will not break any new ground since its concepts of operational fires are similar to FM 100-7. For instance, the general tasks (facilitate maneuver, isolate the battlefield, and destroy critical functions) of operational fires are identical. This may be good or bad depending on one's perspective.

A detailed explanation of operating systems (to include operational fires) can be found in the Armed Forces Staff College (AFSC) Publication 2. It lists six theater operating systems: (1) command and control, (2) intelligence, (3) logistics, (4) fires, (5) maneuver and movement, and (6) protection.<sup>25</sup> Not only does AFSC Pub 2 give "substance" to operational fires, it further divides operational fires into: aerospace, ground, and maritime fires.<sup>26</sup> The single greatest drawback of AFSC Pub 2 is that it is not doctrine. It is simply a textbook designed to help students at the Armed Forces Staff College. Therefore, its utility is limited.

Finally, it is interesting to note that CJCSM 3500.04, Universal Joint Task List, does contain as one of its operational tasks "employ operational firepower." "Firepower refers to the delivery of all types of ordnance to include bombs, rockets, missiles, and artillery against enemy targets at operational depths."<sup>27</sup> This definition, although brief, does refer to operational fires. Under the sub-task "Conduct Joint Force Targeting," language such as "selection of targets that decisively impact campaigns and major operations" reinforces the concept and importance of operational fires.<sup>28</sup> The Universal Joint Task List makes it perfectly clear that combatant and joint force commanders are responsible for performing key operational functions, of which one is the conduct of operational fires.

In summary, we have covered how the Army, Navy, and Marine Corps are doctrinally prepared to fight at the operational level of war. The Army has the most developed doctrine on operational art, while the Navy the least. Even more disheartening is the disjointed and uneven effort displayed by the Services in writing doctrine. The joint doctrine currently being published certainly alleviates some confusion, but it still lacks in continuity and detail. Unfortunately, the responsibility is there for knowing how to fight operationally, but the guidance in how to do it is not present.

#### **Amphibious Operations and Operational Fires**

*Amphibious operations are a very specialised form of warfare. They have "to fit together like a jewelled bracelet", as Churchill once said....The business of war would be far less complicated, if only purely military considerations had to be taken into account.*<sup>29</sup>

Lord Ismay

An amphibious landing may be the most complex, demanding, and difficult operation that a military force will ever have to execute. Amphibious landings present a host of challenges. A few of the more daunting are:

organizational and technical problems, coordination and sustainment issues, and unknown environmental elements.<sup>30</sup> It is little wonder, given the magnitude of problems, that few countries embrace the challenges associated with amphibious operations. An obvious question is, "What value is there in amphibious forces?" B.H. Liddell Hart states that past history provides five conclusions concerning amphibious forces:

1. Amphibious flexibility is a great strategic asset for a sea-based power,
2. Amphibious forces must quickly exploit their landing or its effects will diminish proportionally over time,
3. Successful execution lies in specialized forces,
4. Amphibious forces' value lies in their importance as "lock-openers," and,
5. Amphibious warfare is a problem that calls for specialized treatment.<sup>31</sup>

Joint Pub 3-02 defines an amphibious operation as a "military operation launched from the sea by naval and landing forces embarked in ships or crafts involving a landing on a hostile or potentially hostile shore."<sup>32</sup> There are four types of amphibious operations: assault, withdrawal, demonstration, and raid. The amphibious assault is the only operation that establishes a force on a hostile shore or potentially hostile shore.<sup>33</sup> However, the use of operational fires is possible in any of the four types of operations.

#### **Historical Perspective.**

*The chief utility in history for the analysis of the present and future lies in its ability, not to point out lessons, but to isolate things that need looking at....History provides insights and questions, not answers.*<sup>34</sup>

Geoffrey Till

Operational fires were used extensively (by all Services) in the campaigns of the Central Pacific during the Second World War. In the early campaigns, most operations were characterized by very strong resistance at the water's edge that required the employment of strong assault forces that had to fight their way ashore.<sup>35</sup> An excellent example of the use of operational fires to support an amphibious operation was the planned invasion of Leyte Island by the United States Army on 20 October 1944 (See Appendix C). The strategy in the Pacific was to put American forces astride the Japanese sea lines of communications between the homeland and the Southern Region.<sup>36</sup> The Japanese, having suffered earlier defeats, had fallen back on an inner defense extending from the Kuriles and the Japanese home islands through Formosa and the Philippines to the Netherland East Indies.<sup>37</sup> "To reduce Japanese air strength and prevent reinforcement from the North before the invasion, the fifteen fast carriers of the 3rd Fleet made a series of heavy strikes on Japanese bases."<sup>38</sup> The 3rd Fleet attacked Okinawa in the Ryukyus on 10 October. This was succeeded by fighter sweeps over Northern Luzon on the following day. A concentrated attack occurred on the 12th and 13th as all four air groups focused their firepower on Formosa. So effective were these attacks on Formosa that "the 20th Bomber Command claimed that they had destroyed about 100 Japanese aircraft on the ground and severely damaged maintenance installations."<sup>39</sup>

Clearly these attacks constituted operational fires. First, these air attacks were planned and synchronized. Second, they had an operational purpose (prevent Japanese reinforcements from the North). Third, these attacks forced the enemy to respond operationally earlier than planned, as evidenced by the fact that the Japanese sent every available aircraft against

the American carriers in hopes of delivering a decisive blow.<sup>40</sup> Fourth, these attacks occurred before the invasion of Leyte (by approximately 10 days). Fifth, they occurred outside the area of operations. And finally, the air attacks permitted the assault troops to land with little difficulty. The use of operational fires in the preliminary stages for the invasion was a superb example of thinking operationally.

Operational fires were used in a similar manner during the amphibious assault on Saipan on 15 June 1944 (See Appendix D and E). For Marines, the invasion of Saipan validates the "Forward...From the Sea" concept. The American plan called for the seizure of Saipan first, then followed by Tinian, with Guam as their third objective.<sup>41</sup> Truk, an island located in the Western Carolines, was considered to be central point in the Japanese defensive perimeter. Many strategists considered the capture of Truk too expensive in terms of American lives. Admiral Nimitz was troubled by Truk and the possibility of a build up of Japanese air power on the island. He decided, in mid-April, that a preventive strike was needed against Truk before the Marianas invasion.<sup>42</sup> Furthermore, operational targets were attacked as far apart as the Bonin Islands and the Carolines.<sup>43</sup> "Towards the end of May, Marcus and Wake islands, which flanked the approach to the Marianas, were attacked by one of the fast carrier groups, and during the second week in June heavy bombers from the Marshalls and Admiralties pounded Truk which held the greatest threat to the American invasion force."<sup>44</sup> By the time the invasion took place, the Japanese were thoroughly confused and discouraged at the breadth of the American attacks.

An examination of the criteria used supports the conclusion that these air attacks were operational fires. The air attacks were planned and

synchronized at the operational level. The air attacks had an operational purpose, to protect the flanks (i.e., isolate the objective) and prevent reinforcements. Furthermore, the air attacks had strategic consequences since the entire Japanese fleet had to be reorganized.<sup>45</sup> Further, the fires occurred before the operation and outside the area of operation. Finally, it can be concluded that the air attacks had a decisive impact on the campaign.

Before closing, one final point should be made concerning operational fires. Operational fires can be employed in amphibious operations that do not involve islands. An example of operational fires, not involving an island, was the Allied bombing prior to the Normandy invasion. The Allies focused their air attacks on the German transportation system and other targets in Northern France. "The plan was designed to isolate the Normandy bridgehead from the German reinforcements and disrupt the movements of the German Seventh Army."<sup>46</sup> Here again, operational fires had a decisive impact on the outcome of the campaign.

#### **Conclusion and Recommendations**

In summary, operational art is an important component of military art. It is operational art that acts as a bridge between strategy and tactics. Furthermore, understanding operational art requires an appreciation of operating systems. Operational fires are a critical function and must be synchronized and integrated with the operational commander's concept of maneuver. Operational fires can have a number of purposes: facilitating one's maneuver; disrupting enemy maneuver; isolating of an area; preventing enemy reinforcements; destroying/neutralizing enemy reserves, functions, facilities; or deceiving the enemy as to the point of main attack.

Service and joint doctrine on operational fires are slowly being developed as jointness increasingly becomes the standard for fighting. More importantly, amphibious flexibility is still a valuable strategic asset. The challenge and difficulty of executing amphibious operations warrants a thorough understanding of operational functions, and specifically operational fires. As in the invasions of Leyte and Saipan illustrate, operational fires can have a decisive impact on the outcome of a campaign.

The fact that the Services are beginning to think operationally is promising. It is evident, however, that the Services still cannot agree on operational definitions and the thinking of each Service on the operational level of war is uneven. The inability of the Services to agree on definitions, functions, etc., will certainly degrade our ability to communicate effectively with each other at the joint level. All officers should remember that the Universal Joint Task List clearly lists operational fires as one of the functions that operational commanders are responsible for executing. Fighting operationally is a requirement because "tactical successes alone do not guarantee victory."

I propose several recommendations for the future. First, all operational definitions in our Service doctrine be standardized. If the trend toward jointness continues (which I believe it will) then standard definitions will be essential if we are to continue to be an effective fighting force. As the force structure gets smaller, and weapon platforms become more lethal, the necessity for standardization becomes even more apparent. Second, our publications need to clearly delineate operational level doctrine from tactical doctrine. Unfortunately, most of our Service publications do not clearly differentiate between operational and tactical art. FM 100-7 does a fine job of keeping the levels separate, while NDP-1 fails miserably. We also

need to shorten the time it takes to produce publications. FMFM 2-1, Fighting the MEF, has been in draft for at least four years. This is entirely too long. Third, historical writers need to be encouraged to write operationally. There simply are not enough papers, books, etc., analyzing campaigns from an operational perspective. Students, particularly at the staff and war colleges, need to continue to analyze, study, and write about pertinent operational issues. Finally, the challenge remains, however, in getting the Navy and the Marine Corps to think beyond the "tactical" beachhead. In other words, thinking operationally. No doubt, all the Services are moving to study operational art, but the overall process is entirely too slow. Without a solid theoretical framework for fighting operationally, we may risk lives and extend wars.



# Comparison of Operating Systems

ARMY	MARINE CORPS		NAVY
FM - 100-7	FMFM 1-1 (Current)	FMFM 2-1 (Proposed)	NDP-1
<ul style="list-style-type: none"> <li>• Operational Movement and Maneuver</li> <li>• Operational Protection</li> <li>• Operational Battle Command</li> <li>• Operational Intelligence</li> <li>• Operational Logistics</li> <li>• Operational Fires</li> </ul>	<ul style="list-style-type: none"> <li>• Maneuver</li> <li>• Mobility</li> <li>• Tempo</li> <li>• Intelligence</li> <li>• Surprise</li> <li>• Logistics</li> <li>• Leadership</li> </ul>	<ul style="list-style-type: none"> <li>• Maneuver</li> <li>• Aviation</li> <li>• Fires</li> <li>• Mobility, Countermobility, and Survivability</li> <li>• Combat Service Support</li> <li>• Command and Control</li> <li>• Intelligence</li> </ul>	<ul style="list-style-type: none"> <li>• Command, Control, and Surveillance</li> <li>• Battlespace Dominance</li> <li>• Power Projection</li> <li>• Force Sustainment</li> </ul>

# Comparison of Operational Fires

	ARMY	MARINE CORPS	NAVY	JOINT	NWC, JMO (VEGO)
C H A R A C T E R I S T I C S	<ul style="list-style-type: none"> <li>• Achieve Operational and Strategic Objectives</li> <li>• Hold, Disrupt, Delay, or Limit Enemy Functions</li> <li>• Extend the Battlefield in Space and Time</li> <li>• Expose or Attack Enemy Centers of Gravity</li> <li>• Set Conditions for Operational Maneuver</li> <li>• Deny Terrain in Support of Operational Objectives</li> </ul>	<ul style="list-style-type: none"> <li>• Fires integrated with Maneuver</li> <li>• Part of Commander's Concept of Operations</li> <li>• Top-down Planning</li> </ul>	<ul style="list-style-type: none"> <li>• Power Projection</li> <li>• Emphasis on Platforms</li> </ul>	<ul style="list-style-type: none"> <li>• Synchronized with Maneuver</li> <li>• Decisive Impact</li> <li>• Top-down Planning</li> <li>• Interdiction of Enemy Forces</li> </ul>	<ul style="list-style-type: none"> <li>• Planned and Synchronized at the Operational Level</li> <li>• Operational Purpose</li> <li>• Cause the Enemy to React Operationally or Strategically</li> <li>• Commence Before Major Operation or Campaign</li> <li>• Decisive Impact</li> <li>• Outside Area of Operation</li> </ul>
T A S K S	<ul style="list-style-type: none"> <li>• Facilitate Maneuver</li> <li>• Isolate Battlefield</li> <li>• Destroy Critical Enemy Functions and Facilities</li> </ul>	<p>UNDEFINED</p> <p>• Proposed in FMFM 2-1</p>	<p>UNDEFINED</p>	<ul style="list-style-type: none"> <li>• Facilitate Maneuver</li> <li>• Isolate Battlefield</li> <li>• Destroy Critical Functions</li> </ul> <p>• Proposed in JP 3-09</p>	<ul style="list-style-type: none"> <li>• Facilitate Maneuver</li> <li>• Disrupt Enemy Forces</li> <li>• Isolate an Area</li> <li>• Prevent Reinforcement</li> <li>• Destroy/Neutralize Operational Reserve</li> <li>• Destroy Critical Enemy Functions and Facilities</li> <li>• Deceive the Enemy as to Main Effort</li> </ul>

# THE PHILIPPINES

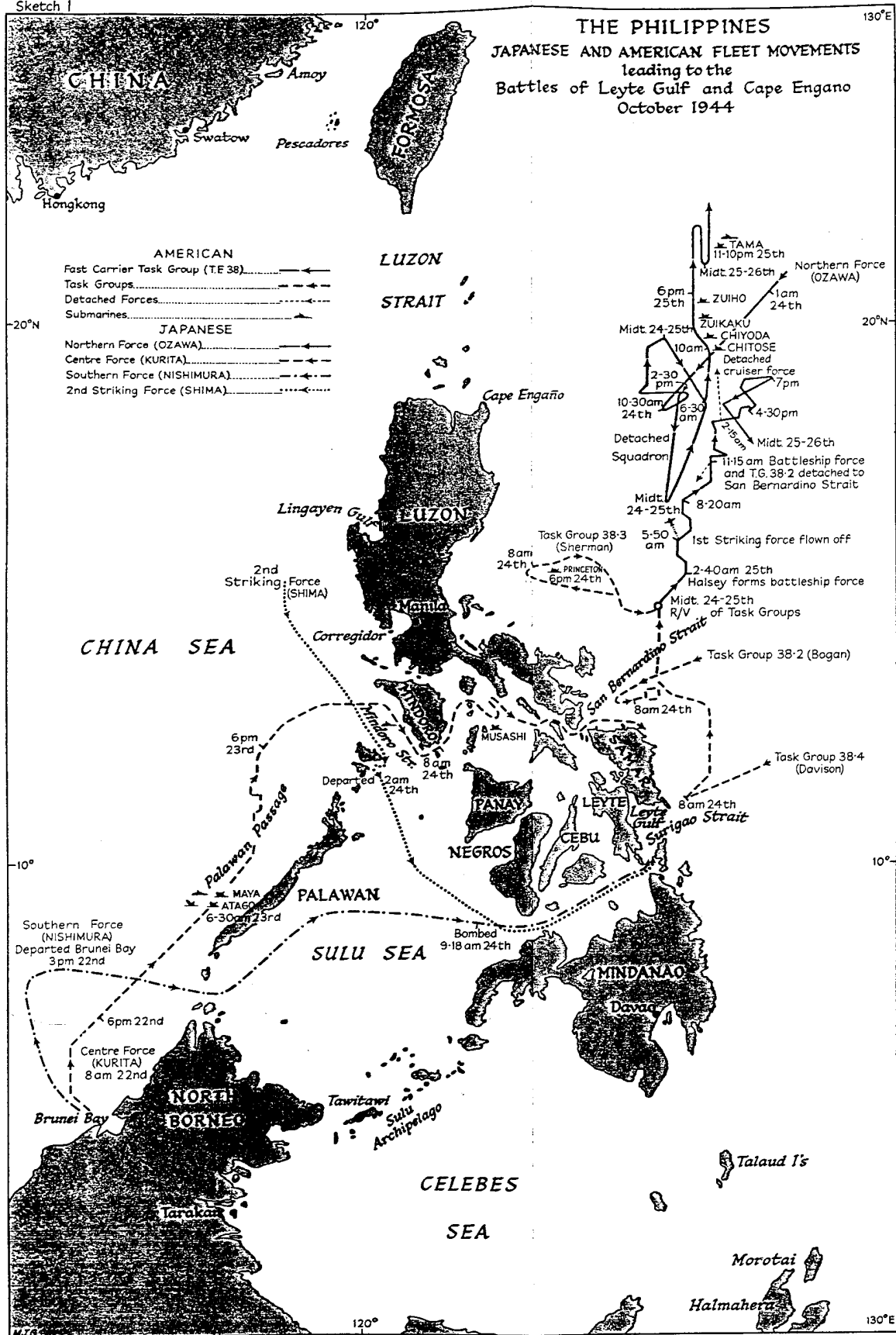
## JAPANESE AND AMERICAN FLEET MOVEMENTS

### leading to the

### Battles of Leyte Gulf and Cape Engaño

### October 1944

[3]

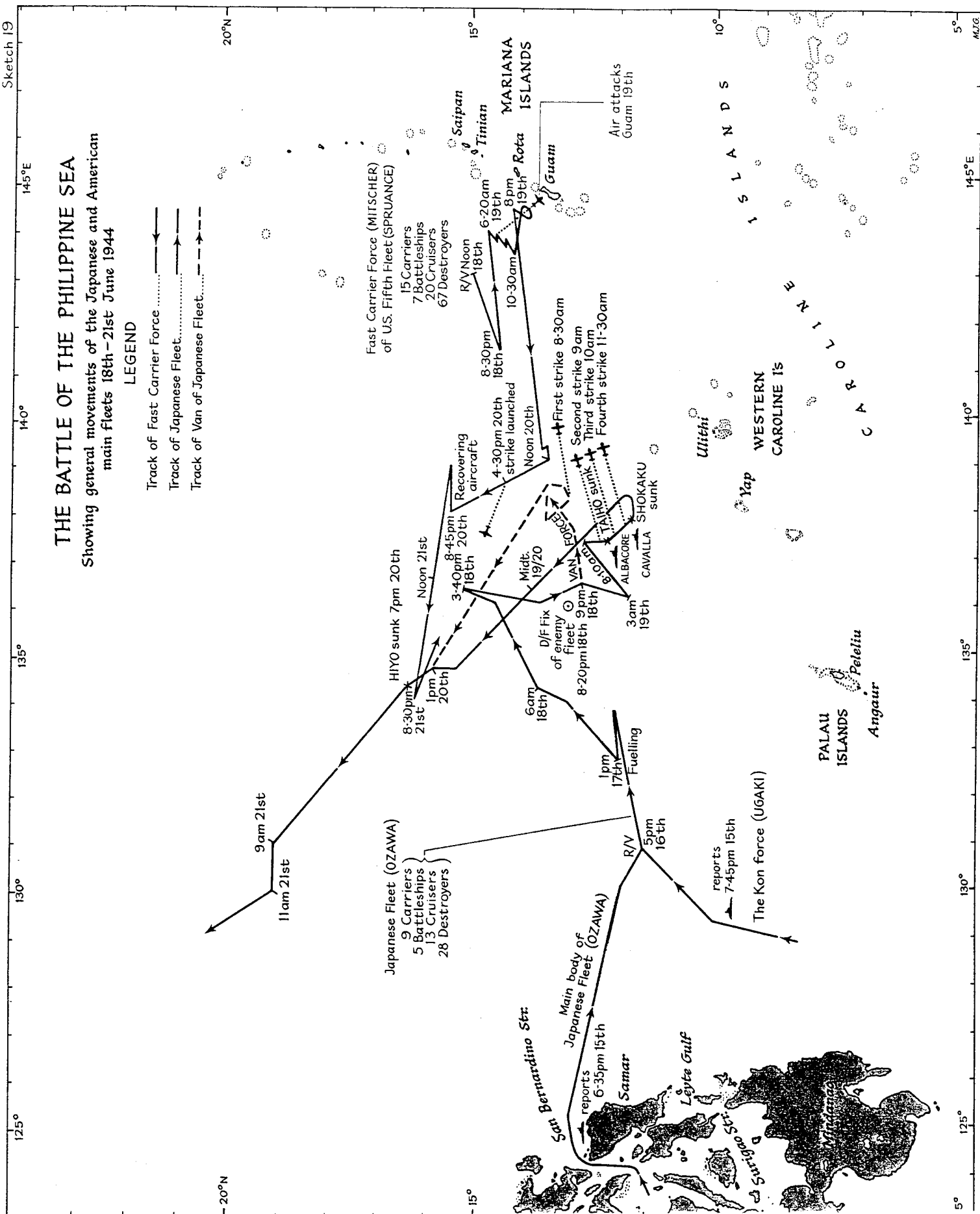


# THE BATTLE OF THE PHILIPPINE SEA

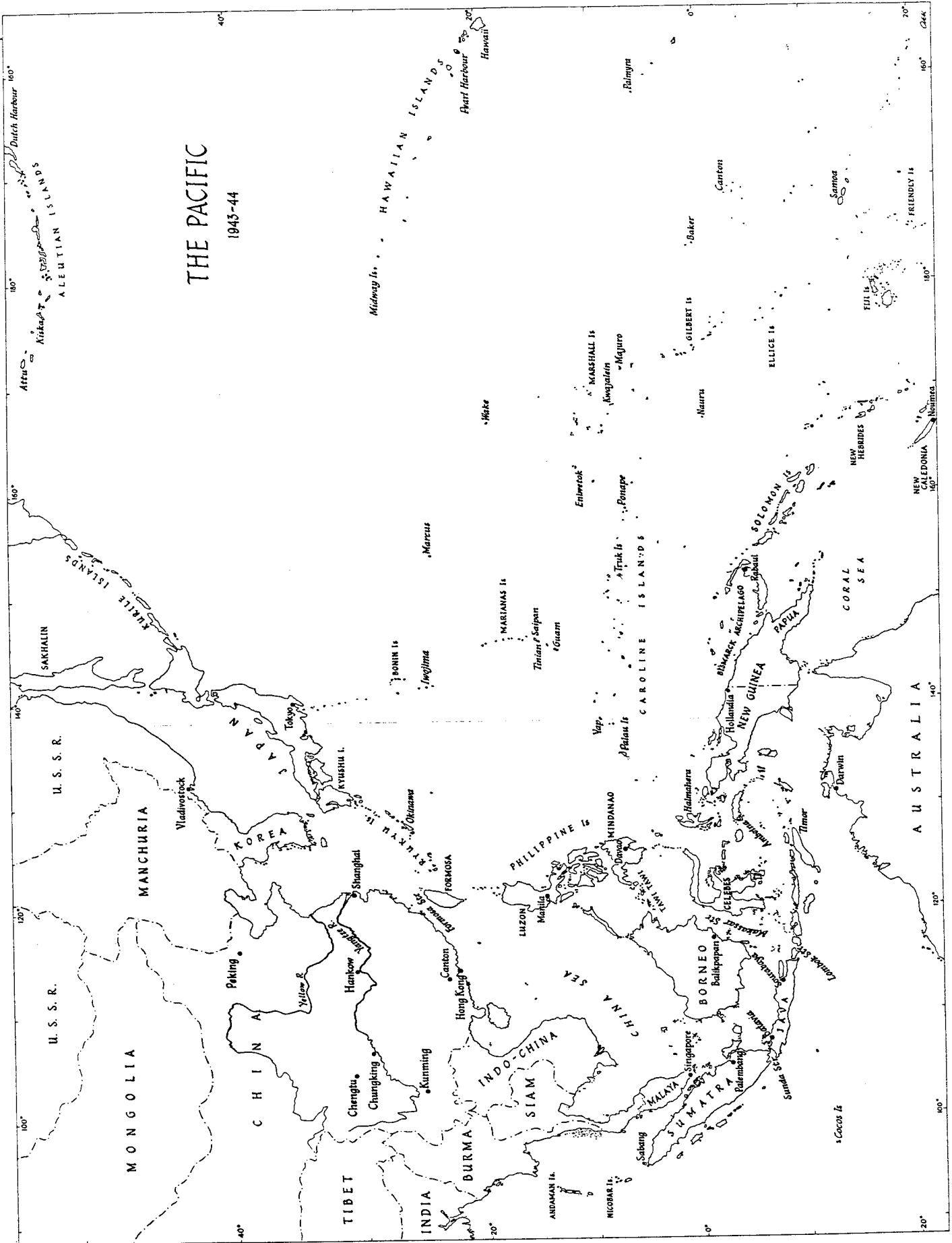
Showing general movements of the Japanese and American main fleets 18th-21st June 1944

## LEGEND

- Track of Fast Carrier Force.....→
- Track of Japanese Fleet.....→
- Track of Van of Japanese Fleet.....→



Map 15



## NOTES

<sup>1</sup>Patrick S. Collins, "Fires from the Sea: The Carrier Battle Group as the Source of Operational Fires," Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1996, 3.

<sup>2</sup>Department of the Navy, Fleet Marine Force Manual 1-1, Campaigning, (Washington, D.C.: 1990), forward.

<sup>3</sup>Department of the Army, Field Manual 100-5, Operations, (Washington, D.C.: 1993), glossary-6.

<sup>4</sup>Joint Chief of Staff Publication 3-0, Doctrine for Joint Operations, (Washington, D.C.: 1992), GL-10.

<sup>5</sup>Department of Navy, Campaigning, 6.

<sup>6</sup>Department of the Army, Field Manual 100-7, Decisive Force: The Army in Theater Operations, (Washington, D.C.: 1995), 5-0.

<sup>7</sup>Milan N. Vego, "Operational Functions," Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1995, 19, 20.

<sup>8</sup>Ibid., 20.

<sup>9</sup>Ibid., 20, 21.

<sup>10</sup>Ibid., 23.

<sup>11</sup>Department of the Army, Operations, 5-4.

<sup>12</sup>Department of the Army, Decisive Forces: The Army in Theater Operations, 5-3.

<sup>13</sup>Ibid., 5-7.

<sup>14</sup>Ibid.

<sup>15</sup>Ibid., 5-8.

<sup>16</sup>Ibid.

<sup>17</sup>Department of the Navy, Fleet Marine Force Manual 1, Warfighting, (Washington D.C.: 1989), 29.

<sup>18</sup>Department of the Navy, Campaigning, forward.

<sup>19</sup>Department of the Navy, Fleet Marine Force Manual 2-1 (Draft), Fighting the MEF, (Washington D.C.: 1992), 1-9.

<sup>20</sup>Ibid., 1-13.

<sup>21</sup>Department of the Navy, "Forward...From the Sea," Navy-Marine Corps Paper, Washington D.C.: 1994, 1.

<sup>22</sup>Joint Chief of Staff Publication 3-0, Doctrine for Joint Operations, preface.

<sup>23</sup>Ibid., IV-13.

<sup>24</sup>Ibid., IV-12.

<sup>25</sup>Armed Forces Staff College Publication 2, Service Warfighting Philosophy and Synchronization of Joint Forces, (Norfolk VA: 1992), II-5-2.

<sup>26</sup>Ibid., II-5-D-6, II-5-D-10, II-5-D-11.

<sup>27</sup>Chairman of the Joint Chiefs of Staff Manual 3500.04, Universal Task List, (Washington D.C.: 1995), 2-83.

<sup>28</sup>Ibid., 2-84.

<sup>29</sup>Michael H. H. Evans, Amphibious Operations (London, 1990), vol. 4, The Projection of Sea Power Ashore, 91.

<sup>30</sup>Ibid., 91.

<sup>31</sup>B. H. Liddell Hart, "The Value of Amphibious Flexibility and Forces," Journal of the Royal Services Institution Vol. CV No. 620 (November 1960): 492.

<sup>32</sup>Joint Chiefs of Staff Publication 3-02, Joint Doctrine for Amphibious Operations, (Washington, D.C.: 1992), I-3, I-4.

<sup>33</sup>Ibid., I-4.

<sup>34</sup>Evans, Amphibious Operations, 13.

<sup>35</sup>Ibid., 10.

<sup>36</sup>James Butler, ed., History of the Second World War, The War Against Japan (London: Her Majesty's Stationary Office, 1965), vol. 4, The Reconquest of Burma, S. Woodburn Kirby, 63.

<sup>37</sup>Ibid., 66.

<sup>38</sup>Ibid., 70.

<sup>39</sup>Ibid.

<sup>40</sup>Ibid.

<sup>41</sup>James Butler, ed., History of the Second World War, The War Against Japan (London: Her Majesty's Stationary Office, 1962), vol. 3, The Decisive Battles, S. Woodburn Kirby, 430.

<sup>42</sup>Edwin P. Hoyt, To The Marianas (New York: Van Nostrand Reinhold Company, 1980), 99.

<sup>43</sup>Butler, The Decisive Battles, 429.

<sup>44</sup>Ibid.

<sup>45</sup>Hoyt, To The Marianas, 99.

<sup>46</sup>Milan N. Vego, "Fundamentals of Operational Design," Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1995, 13.



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